BARKER RYAN STEWART
TOTAL PROJECT SOLUTIONS

Albany Investments Pty Ltd

Waste Management Plan

Residential Flat Building
101 Residential Units

7-11 Bent Street, Gosford

May 2019

ENGINEERING
PLANNING
PROJECT MANAGEMENT
SURVEYING
CERTIFICATION

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Project No.	CC150124
Author	SH
Checked	LW
Approved	LW

Rev No.	Status	Date	Comments
1	Amended from Original	08/05/2019	

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This report is for development application purposes only and is not to be relied upon for construction purposes. The waste calculations included in the report are an estimate only, based on the plans and documents supplied by the client and waste generation guidelines from Council, the EPA and other third parties. This report is a guideline only and should not be used as a basis for feasibility studies, safety procedures, operational costs, demolition / construction estimates or bills of quantities. Should waste generation be higher than expected, the site manager shall make appropriate adjustments to accommodate additional waste. Any equipment recommended in this report shall be assessed by the supplier and site manager to determine it is fit for the intended purpose.

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1 Author and Project Details

AUTHOR DETAILS	
Name	Barker Ryan Stewart
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DEVELOPMENT DETAILS	
Project Details	Residential Flat Building
Address of Development	7 – 11 Bent Street, Gosford
Existing Buildings and other structures currently on the site	Two storey residential flat building, containing four units and a single storey dwelling.
Description of proposed development	Residential Flat Building -101 Units and associated car parking

This development achieves the waste objectives set out in the DCP. The details on this form are the provisions and intentions for minimising waste relating to this project. All records demonstrating lawful disposal of waste will be retained and kept readily accessible for inspection by regulatory authorities such as council, OEH or WorkCover NSW.

Contact Name	Lisa Wrightson
Signature	
Date	8/05/2019

2 Council Requirements

This WMP has been prepared having regard for the specific waste management objectives of the Gosford Council Development Control Plan (DCP) 2013. These objectives include:

Waste minimisation

- *To assist applicants in planning for suitable waste management, through the preparation of a waste management plan.*
- *To minimise resource requirements and construction waste through reuse and recycling and the efficient selection and use of resources.*
- *To minimise demolition waste by promoting adaptability in building design and focusing upon end of life deconstruction.*
- *To encourage building designs, construction and demolition techniques in general which minimise waste generation.*
- *To maximise reuse and recycling of household waste and industrial/commercial waste.*

Waste management

- *To assist applicants in planning for sustainable waste management, through the preparation of a waste management plan.*
- *To assist applicants to develop systems for waste management that ensure waste is transported and disposed of in a lawful manner.*
- *To provide guidance in regards to space, storage, steep narrow allotments, amenity and management of waste management facilities.*
- *To ensure waste management systems are compatible with collection services.*
- *To minimise risks associated with waste management at all stages of development.*

3 Demolition

3.1 Waste Generation

TYPE OF WASTE GENERATED	REUSE	RECYCLE	DISPOSAL	COMMENT
	Estimate Volume (m³)	**Estimate Volume (m³)**	**Estimate Volume (m³)**	**Specify method of on-site reuse, contractor and recycling outlet and/or waste depot to be used**
Excavation material	-	-	-	No waste will be generated. Refer to construction table.
Timber (Side façade / dressed)	-	9.6m³	3.6m³	Transferred to waste management facility or recycling facility.
Gyprock / Cladding	-	-	42m³	Transferred to waste management facility.
Concrete	-	212.9m³	-	Any concrete waste will be crushed and transported to other construction sites.
Masonry (Hebel Block/Fibre cement sheeting/ Pavers / bricks)	-	96m³	7.6m³	Transferred to waste management facility or recycling facility.
Tiles (roof)	-	11m³	7.5m³	Transferred to waste management facility or recycling facility.

TYPE OF WASTE GENERATED	REUSE	RECYCLE	DISPOSAL	COMMENT
	Estimate Volume (m^3)	**Estimate Volume (m^3)**	**Estimate Volume (m^3)**	**Specify method of on-site reuse, contractor and recycling outlet and/or waste depot to be used**
Metal (fence/ Balcony)	-	4.8m^3	-	Transferred to waste recycling facility.
Glass	-	6.9m^3	-	Transferred to waste recycling facility.
Furniture	-	-	-	Furniture will be removed prior to demolition.
Fixtures / Fittings	-	5.2m^3	18.6m^3	Transferred to waste management facility or recycling facility.
Floor coverings	-	-	23.6m^3	Transferred to waste management facility.
Packaging (used pallets / pallet wrap)	-	5.2m^3	2.2m^3	No packaging will be used during the demolition.
Garden organics	4m^3	8m^3	-	Trees will be mulched and reused or transferred off site.
Containers (cans / plastic / glass)	-	2m^3	-	Transferred to waste recycling facility.
Paper / cardboard	-	1.5m^3	-	Transferred to waste recycling facility.
Residual waste	-	-	15.4m^3	Transferred to waste management facility.
Hazardous / special waste (specify)	-	-	-	Should any asbestos be found on the site it will be removed and disposed of by a qualified demolition removalist in accordance with the relevant standards.
Other (Asphalt)	-	3.9m^3	-	Transferred to waste management facility or recycling facility.

3.2 Waste Management

Waste management during demolition and construction will be provided as part of a construction management plan included as part of the construction certificate process. Reuse/ recycling contractor and landfill site for disposal to be determined at Construction Certificate stage.

3.3 Waste Avoidance and Reduction

- Only demolish the necessary parts of the buildings on site and reuse where possible the existing structures;
- Salvage materials for recycling and reuse during the demolition process; and
- The remaining waste to be transported to a recognised builders recycling yard or waste facility.

4 Construction

4.1 Waste Generation

TYPE OF WASTE GENERATED	REUSE	RECYCLE	DISPOSAL	COMMENT
	Estimate Volume (m^3)	Estimate Volume (m^3)	Estimate Volume (m^3)	Specify method of on-site reuse, contractor and recycling outlet and/or waste depot to be used
Excavation material	-	-	14,378m^3	Excavated materials will be reused as fill on other developments.
Timber (Side façade / dressed)	-	21.3m^3	-	Transferred to waste recycling facility.
Gyprock / Cladding	-	-	31.3m^3	Transferred to waste management facility.
Concrete	-	14.7m^3	-	Any excess concrete will be retained in the truck and used elsewhere.
Masonry (Hebel Block/Fibre cement sheeting/ Pavers)	-	36.9m^3	4.6m^3	Transferred to waste management facility or recycling facility.
Tiles (roof)	-	1.5m^3	-	Transferred to waste recycling facility.
Metal (roofing / framing / façade)	-	28.4m^3	-	Transferred to waste recycling facility.
Glass	-	-	-	All glass will be made to order
Furniture	-	-	-	Not at this stage.
Fixtures / fittings	-	-	27.5m^3	Transferred to waste management facility.
Floor coverings	-	16.7m^3	4.5m^3	Transferred to waste management facility or recycling facility.
Packaging (used pallets / pallet wrap)	-	17.3m^3	4.3m^3	Transferred to waste management facility or recycling facility.
Garden organics	4.7m^3	-	-	Organics will be ordered to size in accordance with the quantity survey.
Containers (cans / plastic / glass)	-	27.2m^3	5.6m^3	Transferred to waste management facility or recycling facility.
Paper / cardboard	-	9.1m^3	-	Transferred to waste recycle facility.
Residual waste	-	-	14.3m^3	Transferred to waste management facility.
Hazardous / special waste (specify)	-	-	-	No hazardous materials will be utilised in the construction.
Other	-	-	-	Not Applicable

4.2 Waste Management

Waste management during demolition and construction will be provided as part of a construction management plan included as part of the construction certificate process.

4.3 Waste Avoidance and Reduction

- All fixtures and fittings will be made to measure;
- All materials will be ordered in accordance with a bill of quantities;
- Recycled materials will be utilised where ever possible;
- Measures will be taken to ensure the construction contractor is aware of the waste management procedures and adheres to appropriate guidelines.
- Salvage materials for recycling and reuse during the construction process; and
- The remaining waste to be transported to a recognised builders recycling yard or waste facility.

5 Ongoing Operation

5.1 Waste Generation

The table below show the expected waste generation from the proposed development.

DCP REQUIREMENTS	RECYCLABLES	GENERAL WASTE	GREEN WASTE
Amount generated (L per day)	1,731.4L	1,731.4L	Green waste will be removed by a landscape contractor for communal space. 4 x 240L green waste bins provided for resident's individual green waste.
Amount generated (L per week	12,120L 120L per week per unit	12,120L 120L per week per unit	
Number and size of bins	4 x 1,100L Bins Per cycle 4,400L	4 x 1,100L Bins Per cycle 4,400L	
Frequency of collections	Removed three times per week.	Removed three times per week.	Removed once fortnightly or more regularly as required.

5.2 Waste Storage

WASTE STORAGE	
Floor area for storage bins (m²)	The storage room will be located on the ground floor and will have an area of 52.14m². A bin holding area is also provided at ground level at the eastern boundary, for presentation of the bins for collection.
Green Waste	An area has been provided for the storage of green waste.
Bulky Waste	An area has been provided for the storage of bulky waste.
Floor area required for manoeuvrability (m²)	The storage area is wide enough for bins to move passed each other while leaving enough space for human passage between passing bins.
Height required for manoeuvrability (m)	Provides sufficient overhead clearance, for bin lifters to transfer waste to collection point.
Comment	**Recycle:** The development proposes to provide at least 4 x 1.1m³ for collection 3 times a week. **Waste:** The development proposes to provide at least 4 x 1.1m³ for collection 3 times a week. Additional bins have been provided to ensure availability.

5.3 On-going Waste Removal Procedures

Residential

- A General waste chute has been provided on each residential level.
- Residents will transfer their general waste to the chutes on their respective level.
- The Facility Manager will rotate the waste bins below the chute on a regular basis to ensure they do not over flow.
- A temporary waste storage area will be located on each floor for recycling and will include a 240L bin.
- Residents will transfer their recycling waste to the temporary storage area on each level.
- The Facility Manager will transfer recycling waste from each floor to the main recycling storage area on a daily basis via the lifts. One 240L recycle bin will be sufficient to meet the daily recycling requirements for each floor.
- Four green waste bins will be located in the waste storage area for resident's use.

General

- 1,100L waste bins have been provided for general and recycled waste.
- Bins will be transferred to the waste collection point on the day of collection or the night prior.
- The path of travel is less than 100m, with a grade less than 10%.
- The waste collection vehicle will access the waste collection point via the Gertrude Street laneway. The bins will emptied by the Council or waste contractor on the allocated waste removal days – up to three times per week.
- The strata manager will be responsible for coordinating landscaping by an external contractor. The contractor will reuse mulch onsite where possible, and dispose of green waste off-site.

Bin Management and areas

- The waste lift and areas shall be suitably screened and secured, and will be maintained by building management.
- Extra waste and recycling bins have been provided to ensure that there is always waste and recycling bins available.

Maintenance

- Management shall be responsible for the maintenance of signage, the security of the waste storage area, and the maintenance and security of the waste lift.

Hygiene

- An arrangement will be made with a bin cleaning contractor for regular bin cleaning. The bin contractor will provide a specialised filtration service to ensure pollutants are collected by the mobile unit and appropriately disposed in accordance with EPA Guidelines.
- A cleaning area has been provided.

5.4 Education

Intelligible signage will be erected in the garbage storage areas to identify which bins should be used for different waste and recyclable materials in accordance with the Councils waste minimisation policy.

Building tenants will be supplied with a copy of this WMP to inform them on the concepts of waste minimisation and recycling.

6 Plans and Drawings

The following checklists are designed to help ensure WMP are accompanied by sufficient information to allow assessment of the application.

Drawings are to be submitted to scale, clearly indicating the location of and provisions for the storage and collection of waste and recyclables during:

- Demolition;
- Construction; and
- Ongoing operation.

DEMOLITION	TICK YES
Size and location(s) of waste storage area(s)	NA*
Access for waste collection vehicles	NA*
Areas to be excavated	√
Types and numbers of storage bins likely to be required	NA*
Signage required to facilitate correct use of storage facilities	NA*
CONSTRUCTION	**TICK YES**
Size and location(s) of waste storage area(s)	NA*
Access for waste collection vehicles	NA*
Areas to be excavated	√
Types and numbers of storage bins likely to be required	NA*
Signage required to facilitate correct use of storage facilities	NA*
ON-GOING OPERATION	**TICK YES**
Space	
Size and location of waste storage areas	√
Recycling bins placed next to residual waste bins	√
Space provided for access to and the manoeuvring of bins	√
Any additional facilities	√
Access	
Access route(s) to deposit waste in storage room/area	√
Access route(s) to collect waste from storage room/area	√
Bin carting grade not to exceed 10% and travel distance no greater than 100m	√
Location of final collection point	√
Clearance, geometric design and strength of internal access driveways and roads	√
Direction of traffic flow for internal access driveways and roads	√
Amenity	
Aesthetic design of waste storage areas, including being compatible with the main building/s and adequately screened and visually unobtrusive from the street	√
Signage – type and location	√
Construction details of storage rooms/areas (including floor, walls, doors, ceiling design, sewer connection, lighting, ventilation, security, wash down provisions, cross & longitudinal section showing clear internal dimensions between engaged piers and other obstructions, etc)	√

*Details provided at construction certificate stage.

Refer to the architectural plans for further detail.